SEQUENCE LISTING

<110> Friddle, Carl Johan
      Hilbun, Erin
      Gerhardt, Brenda
      Mathur, Brian
      Walke, D. Wade
      Turner, C. Alexander Jr.

<120> Novel Human 7TM Proteins and Polynucleotides Encoding the Same

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<151> 2000-10-11

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His Val Leu Phe Ile Val Leu Leu Leu Ile Tyr Val Thr Ser Leu Ile
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Gly Asn Ile Gly Met Ile Leu Leu Ile Lys Thr Asp Ser Arg Leu Gln
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Tyr Thr Ser Ala Ile Thr Pro Lys Met Leu Gln Ser Phe Thr Glu Glu
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Asp Cys Tyr Val Ala Ile Cys Lys Pro Leu Arg Tyr Pro Met Ile Met
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Ser Gln Thr Val Tyr Ile Gln Leu Val Ala Gly Ser Tyr Ile Ile Gly
            180             185             190
Ser Ile Asn Ala Ser Val His Thr Gly Phe Thr Phe Ser Leu Ser Phe
            195             200             205
Cys Lys Ser Asn Lys Ile Asn His Phe Phe Cys Asp Gly Leu Pro Ile
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Leu Ala Leu Ser Cys Ser Asn Ile Asp Ile Asn Ile Ile Leu Asp Val
225             230             235                 240
Val Phe Val Gly Phe Asp Leu Met Phe Thr Glu Leu Val Ile Ile Phe
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Ser Tyr Ile Tyr Ile Met Val Thr Ile Leu Lys Met Ser Ser Thr Ala
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Gly Arg Lys Lys Ser Phe Ser Thr Cys Ala Ser His Leu Thr Ala Val
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Ile Lys Thr Asp Ser Arg Leu Gln Thr Pro Met Tyr Phe Phe Pro Gln
    50                  55                  60
His Leu Ala Phe Val Asp Ile Cys Tyr Thr Ser Ala Ile Thr Pro Lys
65                  70                  75                  80
Met Leu Gln Ser Phe Thr Glu Glu Asn Asn Leu Ile Thr Phe Arg Gly
                85                  90                  95
Cys Val Ile Gln Phe Leu Val Tyr Ala Thr Phe Ala Thr Ser Asp Cys
            100                 105                 110
Tyr Leu Leu Ala Ile Met Ala Met Asp Cys Tyr Val Ala Ile Cys Lys
        115                 120                 125
Pro Leu Arg Tyr Pro Met Ile Met Ser Gln Thr Val Tyr Ile Gln Leu
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Val Ala Gly Ser Tyr Ile Ile Gly Ser Ile Asn Ala Ser Val His Thr
145                 150                 155                 160
Gly Phe Thr Phe Ser Leu Ser Phe Cys Lys Ser Asn Lys Ile Asn His
                165                 170                 175
Phe Phe Cys Asp Gly Leu Pro Ile Leu Ala Leu Ser Cys Ser Asn Ile
            180                 185                 190
Asp Ile Asn Ile Ile Leu Asp Val Val Phe Val Gly Phe Asp Leu Met
        195                 200                 205
Phe Thr Glu Leu Val Ile Ile Phe Ser Tyr Ile Tyr Ile Met Val Thr
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Ile Leu Lys Met Ser Ser Thr Ala Gly Arg Lys Lys Ser Phe Ser Thr
225                 230                 235                 240
Cys Ala Ser His Leu Thr Ala Val Thr Ile Phe Tyr Gly Thr Leu Ser
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Tyr Met Tyr Leu Gln Pro Gln Ser Asn Asn Ser Gln Glu Asn Met Lys
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Leu Gly Phe Gly Val Gln His Glu Phe Gln His Val Leu Phe Ile Val
        35   40   45
Leu Leu Leu Ile Tyr Val Thr Ser Leu Ile Gly Asn Ile Gly Met Ile
    50   55   60
Leu Leu Ile Lys Thr Asp Ser Arg Leu Gln Thr Pro Met Tyr Phe Phe
65   70   75   80
Pro Gln His Leu Ala Phe Val Asp Ile Cys Tyr Thr Ser Ala Ile Thr
                85   90   95
Pro Lys Met Leu Gln Ser Phe Thr Glu Glu Asn Asn Leu Ile Thr Phe
            100   105   110
Arg Gly Cys Val Ile Gln Phe Leu Val Tyr Ala Thr Phe Ala Thr Ser
        115   120   125
Asp Cys Tyr Leu Leu Ala Ile Met Ala Met Asp Cys Tyr Val Ala Ile
    130   135   140
Cys Lys Pro Leu Arg Tyr Pro Met Ile Met Ser Gln Thr Val Tyr Ile
145   150   155   160
Gln Leu Val Ala Gly Ser Tyr Ile Ile Gly Ser Ile Asn Ala Ser Val
                165   170   175
His Thr Gly Phe Thr Phe Ser Leu Ser Phe Cys Lys Ser Asn Lys Ile
            180   185   190
Asn His Phe Phe Cys Asp Gly Leu Pro Ile Leu Ala Leu Ser Cys Ser
        195   200   205
Asn Ile Asp Ile Asn Ile Ile Leu Asp Val Val Phe Val Gly Phe Asp
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Leu Met Phe Thr Glu Leu Val Ile Ile Phe Ser Tyr Ile Tyr Ile Met

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            275                 280                 285
Met Lys Val Ala Ser Ile Phe Tyr Gly Thr Val Ile Pro Met Leu Asn
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            35                  40                  45
Ser Asn Thr Leu His Thr Pro Met Tyr Val Phe Leu Leu Thr Leu Ala
        50                  55                  60
Val Val Asp Ile Ile Cys Thr Thr Ser Ile Ile Pro Lys Met Leu Gly
65                  70                  75                  80
Thr Met Leu Thr Ser Glu Asn Thr Ile Ser Tyr Ala Gly Cys Met Ser
                85                  90                  95
Gln Leu Phe Leu Phe Thr Trp Ser Leu Gly Ala Glu Met Val Leu Phe
            100                 105                 110
Thr Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe Pro Leu His
            115                 120                 125
Tyr Ser Thr Ile Met Asn His His Met Cys Val Ala Leu Leu Ser Met
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Val Met Ala Ile Ala Val Thr Asn Ser Trp Val His Thr Ala Leu Ile
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                 195                    200                    205
Ile Leu Thr Cys Ile Ser Tyr Gly Phe Ile Ile Val Ala Ile Leu Arg
       210                    215                    220
Ile Arg Thr Val Glu Gly Lys Arg Lys Ala Phe Ser Thr Cys Ser Ser
225                    230                    235                    240
His Leu Thr Val Val Thr Leu Tyr Tyr Ser Pro Val Ile Tyr Thr Tyr
                 245                    250                    255
Ile Arg Pro Ala Ser Ser Tyr Thr Phe Glu Arg Asp Lys Val Val Ala
                 260                    265                    270
Ala Leu Tyr Thr Leu Val Thr Pro Thr Leu Asn Pro Met Val Tyr Ser
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Phe Gln Asn Arg Glu Met Gln Ala Gly Ile Arg Lys Val Phe Ala Phe
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atcataaacc aaggtgtctg tctgaggatg atggccatgt cgtggctcag tggggtgatc 420
tgtggattca tgcatgtgat agcaacattc tcattaccat tctgtgggcg caatagaata 480
cgtcaatttt tctgtaatat tccacagctc ctaagcctct tagaccccaa agtaattacc 540
attgagattg gagtcatggt ttttggtaca agtcttgtga taatctcctt tgttgtaatt 600
actctctcct acatgtacat tttttctgtc atcatgagga ttccttctaa ggagggtaga 660
tcaaaaacat tttctacctg cattccacat cttgtggttg taacactctt tatgatatct 720
ggcagcattg cctatgtgaa gccaatttca aattctcccc ccgttctgga tgttttcctg 780
tctgcgttct acacagtcgt gccccccgacc ctgaaccccg tcatctatag tctgaggaat 840
agggacatga aggcagccct gagaaggcag tgtggtccct ga                    882


<210> 12
<211> 293
<212> PRT
<213> homo sapiens


<400> 12
Met Gly Phe Ser Asn Ser Trp Asp Ile Gln Ile Val His Ala Ala Leu
1               5                   10                  15
Phe Phe Leu Val Tyr Leu Ala Ala Val Ile Gly Asn Leu Leu Ile Ile
            20                  25                  30
Ile Leu Thr Thr Leu Asp Val His Leu Gln Thr Pro Met Tyr Phe Phe
        35                  40                  45
Leu Arg Asn Leu Ser Phe Leu Asp Phe Cys Tyr Ile Ser Val Thr Ile
    50                  55                  60
Pro Lys Ser Ile Val Ser Ser Leu Thr His Asp Thr Ser Ile Ser Phe
65                  70                  75                  80
Phe Gly Cys Ala Leu Gln Ala Phe Phe Phe Met Asp Leu Ala Thr Thr
                85                  90                  95
Glu Val Ala Ile Leu Thr Val Met Ser Tyr Asp Arg Tyr Met Ala Ile
            100                 105                 110
Cys Arg Pro Leu His Tyr Glu Val Ile Ile Asn Gln Gly Val Cys Leu
        115                 120                 125
Arg Met Met Ala Met Ser Trp Leu Ser Gly Val Ile Cys Gly Phe Met
    130                 135                 140
His Val Ile Ala Thr Phe Ser Leu Pro Phe Cys Gly Arg Asn Arg Ile
145                 150                 155                 160
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Arg Gln Phe Phe Cys Asn Ile Pro Gln Leu Leu Ser Leu Leu Asp Pro
                165                     170               175
Lys Val Ile Thr Ile Glu Ile Gly Val Met Val Phe Gly Thr Ser Leu
                180                     185               190
Val Ile Ile Ser Phe Val Val Ile Thr Leu Ser Tyr Met Tyr Ile Phe
                195                     200               205
Ser Val Ile Met Arg Ile Pro Ser Lys Glu Gly Arg Ser Lys Thr Phe
            210                     215               220
Ser Thr Cys Ile Pro His Leu Val Val Val Thr Leu Phe Met Ile Ser
225                     230                 235                 240
Gly Ser Ile Ala Tyr Val Lys Pro Ile Ser Asn Ser Pro Pro Val Leu
                245                     250               255
Asp Val Phe Leu Ser Ala Phe Tyr Thr Val Val Pro Pro Thr Leu Asn
                260                     265               270
Pro Val Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Ala Ala Leu Arg
            275                     280               285
Arg Gln Cys Gly Pro
        290


<210> 13
<211> 1200
<212> DNA
<213> homo sapiens

<400> 13
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aatccatttt ttttctctct ttaggaagaa atggaacgac cacaagtgat tttaaccaaa 180
ctgaagttgc tgaatttttc ctcatgggat tttcgaattc ctgggatatt cagattgtac 240
atgctgctct attcttccta gtttacctgg cagctgtcat aggaaatctc ctaatcatca 300
tacttaccac tctggatgtt cacctccaaa ccccaatgta tttctttttg agaaacttgt 360
ctttcttaga ttttttgttac atctctgtca caattccaaa atctattgtt agttccttga 420
ctcatgatac ttccatttct ttctttgggt gtgctctgca agccttcttt ttcatggact 480
tggcaactac ggaggtagcc atccttacag tgatgtccta tgaccgctat atggccatct 540
gccggccttt acattatgag gtcatcataa accaaggtgt ctgtctgagg atgatggcca 600
tgtcgtggct cagtggggtg atctgtggat tcatgcatgt gatagcaaca ttctcattac 660
cattctgtgg gcgcaataga atacgtcaat ttttctgtaa tattccacag ctcctaagcc 720
tcttagaccc caaagtaatt accattgaga ttggagtcat ggtttttggt acaagtcttg 780
tgataatctc ctttgttgta attactctct cctacatgta catttttct gtcatcatga 840
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ttgtaacact ctttatgata tctggcagca ttgcctatgt gaagccaatt tcaaattctc 960
cccccgttct ggatgttttc ctgtctgcgt tctacacagt cgtgcccccg accctgaacc 1020
ccgtcatcta tagtctgagg aataggggaca tgaaggcagc cctgagaagg cagtgtggtc 1080
cctgagaagg cagtgtggta tgctagatga agaatttgat tacggaccag actcttgaac 1140
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<210> 14
<211> 1074
<212> DNA
<213> homo sapiens

<400> 14
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agagccattt cattgcaaga aatctcaaag atttcccttc ttttctgggt ccttctcttg 120
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9

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gtcatttcta gactttact agccatgaca ctaggaaaca gcactgaagt cactgaattc 180
tatcttctgg gatttggtgc ccagcatgag tttttggtgta tcctcttcat tgtattcctt 240
ctcatctatg tgacctccat aatgggtaat agtggaataa tcttactcat caacacagat 300
tccagatttc aaacactcac gtactttttt ctacaacatt tggctttgt tgatatctgt 360
tacacttctg ctatcactcc caagatgctc caaagcttca cagaagaaaa gaatttgata 420
ttatttcagg gctgtgtgat acaattctta gtttatgcaa catttgcaac cagtgactgt 480
tatctcctgg ctatgatggc agtggatcct tatgttgcca tctgtaagcc ccttcactat 540
actgtaatca tgtcccgaac agtctgcatc cgtttggtag ctggttcata catcatgggc 600
tcaataaatg cctctgtaca aacaggtttt acatgttcac tgtccttctg caagtccaat 660
agcatcaatc acttttctg tgatgttccc cctattcttg ctctttcatg ctccaatgtt 720
gacatcaaca tcatgctact gtttgtcttt gtgggatcta acttgatatt cactgggttg 780
gtcgtcatct ttcctacat ctacatcatg gccaccatcc tgaaaatgtc ttctagtgca 840
ggaaggaaaa atccttctc aacatgtgct tcccacctga ccgcagtcac catttctat 900
gggacactct cttacatgta tttgcagtct cattctaata attcccagga aaatatgaaa 960
gtggcctta tattttatgg cacagttatt cccatgttaa atcctttaat ctatagcttg 1020
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<210> 15
<211> 357
<212> PRT
<213> homo sapiens

<400> 15
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Met Asn Asn Thr Ile Val Phe Val Ile Lys Ile Gln Ile Glu Lys Ser
1               5                   10                  15
Asp Leu Lys Tyr Arg Ala Ile Ser Leu Gln Glu Ile Ser Lys Ile Ser
            20                  25                  30
Leu Leu Phe Trp Val Leu Leu Leu Val Ile Ser Arg Leu Leu Leu Ala
        35                  40                  45
Met Thr Leu Gly Asn Ser Thr Glu Val Thr Glu Phe Tyr Leu Leu Gly
    50                  55                  60
Phe Gly Ala Gln His Glu Phe Trp Cys Ile Leu Phe Ile Val Phe Leu
65                  70                  75                  80
Leu Ile Tyr Val Thr Ser Ile Met Gly Asn Ser Gly Ile Ile Leu Leu
                85                  90                  95
Ile Asn Thr Asp Ser Arg Phe Gln Thr Leu Thr Tyr Phe Phe Leu Gln
            100                 105                 110
His Leu Ala Phe Val Asp Ile Cys Tyr Thr Ser Ala Ile Thr Pro Lys
        115                 120                 125
Met Leu Gln Ser Phe Thr Glu Glu Lys Asn Leu Ile Leu Phe Gln Gly
    130                 135                 140
Cys Val Ile Gln Phe Leu Val Tyr Ala Thr Phe Ala Thr Ser Asp Cys
145                 150                 155                 160
Tyr Leu Leu Ala Met Met Ala Val Asp Pro Tyr Val Ala Ile Cys Lys
                165                 170                 175
Pro Leu His Tyr Thr Val Ile Met Ser Arg Thr Val Cys Ile Arg Leu
            180                 185                 190
Val Ala Gly Ser Tyr Ile Met Gly Ser Ile Asn Ala Ser Val Gln Thr
        195                 200                 205
Gly Phe Thr Cys Ser Leu Ser Phe Cys Lys Ser Asn Ser Ile Asn His
    210                 215                 220
Phe Phe Cys Asp Val Pro Pro Ile Leu Ala Leu Ser Cys Ser Asn Val
225                 230                 235                 240
Asp Ile Asn Ile Met Leu Leu Val Val Phe Val Gly Ser Asn Leu Ile
                245                 250                 255
Phe Thr Gly Leu Val Val Ile Phe Ser Tyr Ile Tyr Ile Met Ala Thr
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260   265   270
Ile Leu Lys Met Ser Ser Ser Ala Gly Arg Lys Lys Ser Phe Ser Thr
            275   280   285
Cys Ala Ser His Leu Thr Ala Val Thr Ile Phe Tyr Gly Thr Leu Ser
        290   295   300
Tyr Met Tyr Leu Gln Ser His Ser Asn Asn Ser Gln Glu Asn Met Lys
305   310   315   320
Val Ala Phe Ile Phe Tyr Gly Thr Val Ile Pro Met Leu Asn Pro Leu
                325   330   335
Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Leu Lys Val Ile
            340   345   350
Gly Lys Lys Leu Phe
        355

<210> 16
<211> 930
<212> DNA
<213> homo sapiens

<400> 16
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ggtaatagtg gaataatctt actcatcaac acagattcca gatttcaaac actcacgtac 180
ttttttctac aacatttggc ttttgttgat atctgttaca cttctgctat cactcccaag 240
atgctccaaa gcttcacaga agaaaagaat ttgatattat ttcagggctg tgtgatacaa 300
ttcttagttt atgcaacatt tgcaaccagt gactgttatc tcctggctat gatggcagtg 360
gatccttatg ttgccatctg taagcccctt cactatactg taatcatgtc ccgaacagtc 420
tgcatccgtt ggtagctgg ttcatacatc atgggctcaa taaatgcctc tgtacaaaca 480
ggttttacat gttcactgtc cttctgcaag tccaatagca tcaatcactt tttctgtgat 540
gttcccccta ttcttgctct ttcatgctcc aatgttgaca tcaacatcat gctacttgtt 600
gtctttgtgg gatctaactt gatattcact gggttggtcg tcatcttttc ctacatctac 660
atcatggcca ccatcctgaa aatgtcttct agtgcaggaa ggaaaaaatc cttctcaaca 720
tgtgcttccc acctgaccgc agtcaccatt ttctatggga cactctctta catgtatttg 780
cagtctcatt ctaataattc ccaggaaaat atgaaagtgg cctttatatt ttatggcaca 840
gttattccca tgttaaatcc tttaatctat agcttgagaa ataaggaagt aaaagaagct 900
ttaaaagtga tagggaaaaa gttattttaa   930

<210> 17
<211> 309
<212> PRT
<213> homo sapiens

<400> 17
Met Thr Leu Gly Asn Ser Thr Glu Val Thr Glu Phe Tyr Leu Leu Gly
1   5   10   15
Phe Gly Ala Gln His Glu Phe Trp Cys Ile Leu Phe Ile Val Phe Leu
            20   25   30
Leu Ile Tyr Val Thr Ser Ile Met Gly Asn Ser Gly Ile Ile Leu Leu
        35   40   45
Ile Asn Thr Asp Ser Arg Phe Gln Thr Leu Thr Tyr Phe Phe Leu Gln
    50   55   60
His Leu Ala Phe Val Asp Ile Cys Tyr Thr Ser Ala Ile Thr Pro Lys
65   70   75   80
Met Leu Gln Ser Phe Thr Glu Glu Lys Asn Leu Ile Leu Phe Gln Gly
                85   90   95

11

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Cys Val Ile Gln Phe Leu Val Tyr Ala Thr Phe Ala Thr Ser Asp Cys
            100                 105                 110
Tyr Leu Leu Ala Met Met Ala Val Asp Pro Tyr Val Ala Ile Cys Lys
            115                 120                 125
Pro Leu His Tyr Thr Val Ile Met Ser Arg Thr Val Cys Ile Arg Leu
        130                 135                 140
Val Ala Gly Ser Tyr Ile Met Gly Ser Ile Asn Ala Ser Val Gln Thr
145                 150                 155                 160
Gly Phe Thr Cys Ser Leu Ser Phe Cys Lys Ser Asn Ser Ile Asn His
                165                 170                 175
Phe Phe Cys Asp Val Pro Pro Ile Leu Ala Leu Ser Cys Ser Asn Val
            180                 185                 190
Asp Ile Asn Ile Met Leu Leu Val Val Phe Val Gly Ser Asn Leu Ile
            195                 200                 205
Phe Thr Gly Leu Val Val Ile Phe Ser Tyr Ile Tyr Ile Met Ala Thr
        210                 215                 220
Ile Leu Lys Met Ser Ser Ser Ala Gly Arg Lys Lys Ser Phe Ser Thr
225                 230                 235                 240
Cys Ala Ser His Leu Thr Ala Val Thr Ile Phe Tyr Gly Thr Leu Ser
                245                 250                 255
Tyr Met Tyr Leu Gln Ser His Ser Asn Asn Ser Gln Glu Asn Met Lys
            260                 265                 270
Val Ala Phe Ile Phe Tyr Gly Thr Val Ile Pro Met Leu Asn Pro Leu
            275                 280                 285
Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Leu Lys Val Ile
        290                 295                 300
Gly Lys Lys Leu Phe
305


<210> 18
<211> 2600
<212> DNA
<213> homo sapiens

<400> 18
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ttcagtcctt gttagatgtt aaaatgaaga gaattgtttc ttgttcctca actacagaat 180
tgaaaaaaaa aagtaataga aaatgtaagg ctatttctca ggcatccatt acataatgag 240
gttattttgc ttgtaaagaa tatcacatag atgagagatg cagtctaggg atactaatac 300
aaagacacgt tgaagccttc aaacatatgt gaaccatgaa cacatttcaa aaaaattctc 360
tctaattcta ttaatttcca aagctggaac caaaattaaa atggtaagtg ctgtgaaca 420
attataagtt ctaaaaaag taaaaaatta cattttagca ttactttaaa aatatggata 480
gctgtttaat acagaggaaa attgtcaatc tatgtttcta agaactatac acattaggag 540
ttaggatact tctaagacaa tctccttcga ttttgaagat gaatccattt catcttacat 600
caagtaaatc actctttact tgatgattat aaatacattt cttaaatttg aaaatgaata 660
acactattgt atttgtcata aaaatacaaa tagaaaaaag tgacttgaaa tatagagcca 720
tttcattgca agaaatctca aagatttccc ttcttttctg ggtccttctc ttggtcattt 780
ctagactttt actagccatg acactaggaa acagcactga agtcactgaa ttctatcttc 840
tgggatttgg tgcccagcat gagtttggt gtatcctctt cattgtattc cttctcatct 900
atgtgacctc cataatgggt aatagtggaa taatcttact catcaacaca gattccagat 960
ttcaaacact cacgtacttt tttctacaac atttggcttt tgttgatatc tgttacactt 1020
ctgctatcac tcccaagatg ctccaaagct tcacagaaga aaagaatttg atattatttc 1080
agggctgtgt gatacaattc ttagtttatg caacatttgc aaccagtgac tgttatctcc 1140
tggctatgat ggcagtggat ccttatgttg ccatctgtaa gccccttcac tatactgtaa 1200
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12

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tcatgtcccg aacagtctgc atccgtttgg tagctggttc atacatcatg ggctcaataa 1260
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atcacttttt ctgtgatgtt ccccctattc ttgctctttc atgctccaat gttgacatca 1380
acatcatgct acttgttgtc tttgtgggat ctaacttgat attcactggg ttggtcgtca 1440
tcttttccta catctacatc atggccacca tcctgaaaat gtcttctagt gcaggaagga 1500
aaaaatcctt ctcaacatgt gcttcccacc tgaccgcagt caccattttc tatgggacac 1560
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ttatatttta tggcacagtt attcccatgt taaatccttt aatctatagc ttgagaaata 1680
aggaagtaaa agaagcttta aaagtgatag ggaaaaagtt attttaaatc agccccagtt 1740
gttaacattc aactcaacaa atcatccaac atagctgttc tgctaaaatt taatttttcc 1800
acaataagga atatgtagaa agatgtcaaa ttaataatct aacatcacct ctagaggaat 1860
ttaaaataca aaagccaaca aatcccaaac ctagcagaag aaaaaaataa ctaaaatcag 1920
aacagaactg aacaaaattg agacccaaaa tttatgcaaa aatttaatga aaccaaaatt 1980
tggtttcttg gaagaataaa taagattggt aggctgctag ccagattcac aaagagaaaa 2040
gagggaatat ctaaataagc acaaccagaa agaacaaagg tgacattaca accaatccca 2100
cagaaataca aaaaaatact cagagactat tatgaacact tccatgcaaa taagctagaa 2160
aatatagaga aaaatggatg aattcctggg aacatacagc ctctcaggat tttatcagaa 2220
agacactgaa accctgagcc aatcaatacc aagttttgaa attgaatctc tactaaaaaa 2280
aacctaccaa ccaaaaaaaa aaatcccaga ccaaaagaat ttgctgtcaa attctatcag 2340
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gacacaatga aaaagaaaa ctgcaagcca gtattcctga taaacataga tgcaaaacca 2520
tcaatgaaat actagcaaac caaattcaac agcacatcaa aagttaattc accatgatca 2580
agtaggcttc attcttggat                                          2600

<210> 19
<211> 933
<212> DNA
<213> homo sapiens

<400> 19
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gctctggagt tgttcctctt tgggttttc ttgctattct acagcttaac cctgatggga 120
aatgggatta tcctggggct catctacttg gactctagac tgcacacacc catgtatgtc 180
ttcctgtcac acctggccat tgtggacatg tcctatgcct cgagtactgt ccctaagatg 240
ctagcaaatc ttgtgatgca caaaaaagtc atctcctttg ctccttgcat acttcagact 300
tttttgtatt tggcgtttgc tattacagag tgtctgattt tggtgatgat gtgctatgat 360
cggtatgtgg caatctgtca ccccttgcaa tacaccctca ttatgaactg gagagtgtgc 420
actgtcctgg cytcaacttg ctggatattt agctttctct tggctctggt ccatattact 480
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atgtccgtat tcaaattggc ctgtgctgac actaggctca accaggtggt cctatttgcg 600
ggttctgcgt tcatcttagt ggggccgctc tgcctggtgc tggtctccta cttgcacatc 660
ctggtggcca tcttgaggat ccagtctggg gagggccgca gaaaggcctt ctctacctgc 720
tcctcccacc tctgcgtggt ggggcttttc tttggcagcg ccattgtcat gtacatggcc 780
cccaagtcaa gccattctca agaacggagg aagatccttt ccctgtttta cagccttttc 840
aacccgatcc tgaaccccct catctacagc cttaggaatg cagaggtgaa agggggctcta 900
aagagagtcc tttggaaaca gagatcaatg tga                             933

<210> 20
<211> 310
<212> PRT
<213> homo sapiens

<400> 20
Met Glu Ser Asn Gln Thr Trp Ile Thr Glu Val Ile Leu Leu Gly Phe
1               5                   10                  15
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13

Gln Val Asp Pro Ala Leu Glu Leu Phe Leu Phe Gly Phe Phe Leu Leu
        20   25   30
Phe Tyr Ser Leu Thr Leu Met Gly Asn Gly Ile Ile Leu Gly Leu Ile
        35   40   45
Tyr Leu Asp Ser Arg Leu His Thr Pro Met Tyr Val Phe Leu Ser His
    50   55   60
Leu Ala Ile Val Asp Met Ser Tyr Ala Ser Ser Thr Val Pro Lys Met
65   70   75   80
Leu Ala Asn Leu Val Met His Lys Lys Val Ile Ser Phe Ala Pro Cys
                85   90   95
Ile Leu Gln Thr Phe Leu Tyr Leu Ala Phe Ala Ile Thr Glu Cys Leu
            100   105   110
Ile Leu Val Met Met Cys Tyr Asp Arg Tyr Val Ala Ile Cys His Pro
        115   120   125
Leu Gln Tyr Thr Leu Ile Met Asn Trp Arg Val Cys Thr Val Leu Ala
    130   135   140
Ser Thr Cys Trp Ile Phe Ser Phe Leu Leu Ala Leu Val His Ile Thr
145   150   155   160
Leu Ile Leu Arg Leu Pro Phe Cys Gly Pro Gln Lys Ile Asn His Phe
                165   170   175
Phe Cys Gln Ile Met Ser Val Phe Lys Leu Ala Cys Ala Asp Thr Arg
            180   185   190
Leu Asn Gln Val Val Leu Phe Ala Gly Ser Ala Phe Ile Leu Val Gly
            195   200   205
Pro Leu Cys Leu Val Leu Val Ser Tyr Leu His Ile Leu Val Ala Ile
    210   215   220
Leu Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys
225   230   235   240
Ser Ser His Leu Cys Val Val Gly Leu Phe Phe Gly Ser Ala Ile Val
            245   250   255
Met Tyr Met Ala Pro Lys Ser Ser His Ser Gln Glu Arg Arg Lys Ile
            260   265   270
Leu Ser Leu Phe Tyr Ser Leu Phe Asn Pro Ile Leu Asn Pro Leu Ile
            275   280   285
Tyr Ser Leu Arg Asn Ala Glu Val Lys Gly Ala Leu Lys Arg Val Leu
    290   295   300
Trp Lys Gln Arg Ser Met
305   310

14